1. (Currently Amended) An apparatus for use with a dual imaging system including a first and a second imaging configurations to collect first and second image data sets, respectively, that define adjacent first and second imaging areas along a translation axis, respectively, and that include first and second imaging detectors laterally displaced from the axis, respectively, the first and second configurations fixed with respect to each other along the axis, the system positioned adjacent a table support that supports a table for movement through the imaging areas along the axis, the apparatus for compensating for downward table ~~deflection~~ divergence at the extended end of the table that occurs during table extension, the apparatus ~~and~~ comprising:

at least one sensor for sensing the amount that ~~the position of~~ at least ~~one~~ a first table segment diverges downward as the table is extended from the support and into the imaging areas;

a determiner for using the ~~position signals~~ amount that the at least a first table segment diverges to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition; and

a compensator using the at least one relative position to modify at least one of the data sets prior to the sets being combined to form a unified image.

2. (Original) The apparatus of claim 1 wherein the first configuration is a functional configuration for obtaining imaging data corresponding to a dynamic characteristic and the second configuration is a static configuration for obtaining data corresponding to a static characteristic.

3. (Original) The apparatus of claim 2 wherein the static configuration is positioned between the support and the functional configuration.

4. (Original) The apparatus of claim 3 wherein the sensor is positioned adjacent the functional configuration opposite the static configuration.

5. (Currently Amended) The apparatus of claim 4 wherein the at least one sensor is a first sensor and the apparatus further includes at least a second sensor that senses the amount that ~~the position of~~ at least a second table segment diverges downward as the table is extended from the support and into the imaging areas and, wherein, the determiner also uses ~~position signals from the second sensor~~ the amount that the at least a second table segment diverges to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition.

6. (Original) The apparatus of claim 5 wherein the second sensor is positioned between the functional and static configurations.

7. (Original) The apparatus of claim 5 wherein the determiner determines the relative positions of each of the functional and static detectors with respect to the table and the compensator uses each of the relative positions to modify at least one of the data sets prior to the sets being combined to form a functional/static image.

8. (Original) The apparatus of claim 6 wherein the compensator modifies each of the functional and static data sets prior to combining.

9. (Currently Amended) The apparatus of claim 8 wherein each of the first and second sensors senses the vertical position of the table with respect to a fixed reference point and the ~~position signals~~ amount that each segment diverges indicates the reference point to vertical table position distance.

10. (Original) The apparatus of claim 9 wherein the sensors are selected from a group consisting of laser sensors, ultrasonic sensors, light sensors, optical sensors, magnetic sensors and resistive sensors.

11. (Currently Amended) The apparatus of claim 1 wherein the at least one sensor is a first sensor positioned adjacent the system and opposite the support and the apparatus further includes at least a second sensor positioned between the first and second configurations that senses the amount that ~~the position of~~ at least a second table segment diverges as the table is extended from the support and into the imaging areas and, wherein, the determiner also uses ~~position signals from the second sensor~~ the amount that the at least a second table segment diverges to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition.

12. (Currently Amended) A method for use with a dual imaging system including first and second imaging configurations to collect first and second image data sets, respectively, that define adjacent first and second imaging areas along a translation axis, respectively, and that include first and second imaging detectors laterally displaced from the axis, respectively, the first and second configurations fixed with respect to each other along the axis, the system positioned adjacent a table support that supports a table for movement through the imaging areas along the axis, the method for compensating for downward divergence at the end of the table that extends from the support ~~deflection~~ during table extension and comprising the steps of:

sensing the amount that ~~position of~~ at least a first ~~one~~ table segment diverges downward as the table is extended from the support and into the imaging areas;

using the amount that the at least a first table segment diverges ~~position signals~~ to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition; and

using the at least one relative position to modify at least one of the data sets prior to the sets being combined to form a unified image.

13. (Original) The method of claim 12 wherein the step of sensing includes providing a sensor ~~is~~ positioned adjacent the system opposite the support.

14. (Currently Amended) The method of claim 13 wherein the step of sensing ~~providing a sensor~~ includes providing a first sensor adjacent the system and a second sensor adjacent the system ~~and wherein the step of using position signals includes using signals from each of the first and second sensors~~.

15. (Original) The method of claim 14 wherein the step of providing the second sensor includes positioning the second sensor between the functional and static configurations.

16. (Currently Amended) The method of claim 12 wherein the step of using the amount that the at least a first table segment diverges ~~position signals~~ includes the step of determining the relative positions of each of the first and second detectors with respect to the table and the step of using the relative positions includes using each of the relative positions to modify at least one of the data sets prior to the sets being combined to form a unified image.

17. (Currently Amended) The method of claim 12 wherein the ~~compensator modifies~~ the step of modifying includes modifying each of the first and second data sets prior to combining.

18. (Currently Amended) The method of claim 12 wherein the step of sensing includes sensing the vertical position of the first table segment with respect to a reference point.

19. (Original) An apparatus for use with a dual imaging system including a functional imaging configuration and a static imaging configuration to collect functional and static image data sets, respectively, that define adjacent functional and static imaging areas along a translation axis, respectively, and that include functional and static imaging detectors laterally displaced from the axis, respectively, the functional and static configurations fixed with respect to each other along the axis, the system positioned adjacent a table support that supports a table for movement through the imaging areas along the axis, the apparatus for compensating for table deflection during table extension and comprising:

a first sensor for sensing the vertical position of at least a first table segment as the table is extended from the support and into the imaging areas, the first sensor positioned adjacent the system opposite the support;

a second sensor for sensing the vertical position of at least a second table segment as the table is extended from the support and into the imaging areas, the second sensor positioned between the first sensor and the support;

a determiner for using the position signals from the first and second sensors to determine the relative positions of each of the functional and static detectors with respect to the table during data acquisition; and

a compensator using the relative positions to modify at least one of the data sets prior to the sets being combined to form a functional/static image.

20. (Original) The apparatus of claim 19 wherein the static configuration is positioned between the support and the functional configuration.

21. (Original) A method for use with a dual imaging system including a functional imaging configuration and a static imaging configuration to collect functional and static image data sets, respectively, that define adjacent functional and static imaging areas along a translation axis, respectively, and that include functional and static imaging detectors laterally displaced from the axis, respectively, the functional and static configurations fixed with respect to each other along the axis, the system positioned adjacent a table support that supports a table for movement through the imaging areas along the axis, the method for compensating for table deflection during table extension and comprising the steps of:

providing first and second position sensors adjacent the imaging area and displaced along the axis for sensing the vertical positions of the table along the axis during data acquisition;

sensing the positions of table segments as the table is extended from the support and into the imaging areas;

using the position signals to determine the relative positions of each of the functional and static detectors with respect to the table during data acquisition; and

using the relative positions to modify at least one of the data sets prior to the sets being combined to form a functional/static image.

22. (Newly Added) An apparatus for use with a dual imaging system including a first and a second imaging configurations to collect first and second image data sets, respectively, that define adjacent first and second imaging areas along a translation axis, respectively, and that include first and second imaging detectors laterally displaced from the axis, respectively, the first and second configurations fixed with respect to each other along the axis, the apparatus comprising:

a table support positioned adjacent the system;

a table supported by the support such that one end of the table is extendable from the support for movement through the imaging areas along the axis, the extended portion of the table sagging downwardly as the table is extended from the support;

at least one sensor for sensing the amount by which at least one table segment sags as the table is extended from the support and into the imaging areas;

a determiner for using the amount by which the table segment sags to determine the relative position of at least one of the first and second detectors with respect to the table during data acquisition; and

a compensator using the at least one relative position to modify at least one of the data sets prior to the sets being combined to form a unified image.